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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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SPIEL ASSOCIATES, INC.,

Plaintiff,

-against-

GATEWAY BOOKBINDING SYSTEMS,
LTD.,

Defendant.
-----x

MEMORANDUM AND ORDER

Case No. 03-CV-4696 (FB) (RLM)

Appearances:

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BLOCK, Senior District Judge:

Plaintiff Spiel Associates, Inc. ("Spiel") alleges that defendant Gateway Bookbinding Systems, Ltd. ("Gateway") infringed two of Spiel's patents covering an inline plastic-spiral bookbinding system which forms plastic spiral coils and inserts the coils into pre-punched holes in paper. Before the Court is Spiel's objections to the June 21, 2007 Report and Recommendation ("R&R") of Magistrate Judge Roanne L. Mann, which itself adopted, over Spiel's objections, the November 20, 2006 Report of Special Master Lawrence B. Goodwin. Pursuant to Fed. R. Civ. P. 53, the Special Master was appointed, on consent of the parties, by Magistrate Judge Mann for the purpose of constructing the claims contained in Spiel's patents; after conducting a hearing in accordance with *Markman v.*

Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996), the Special Master recommended the construction of twenty terms contained in Spiel's patents.

As it did before the Magistrate Judge, Spiel objects to the construction of four of these terms: (1) "conveyor," (2) "hot binding coils," (3) "first higher temperature," and (4) "ambient air;" the parties do not object to the construction of the other terms. For reasons stated below, after reviewing the construction of the disputed terms *de novo*, see Fed. R. Civ. P. 53(f) (requiring *de novo* review where objections to a Master's recommendations are made), the Court adopts the Special Master's and Magistrate Judge's construction of the terms "conveyor," "first higher temperature" and "ambient air," and defines "hot binding coils" as coils formed in the forming machine which have not been cooled by means other than exposure to ambient air within the forming machine.

I

Spiel has obtained two patents to cover its bookbinding system: Patent No. 6,547,502 dated April 15, 2003 (the "'502 Patent"), and Patent No. 6,726,462 dated April 27, 2004 (the "'462 Patent"); the latter is a "continuation of the '502 patent." Docket Entry # 32 ("Am. Verified Compl.") at ¶ 12. According to Spiel, prior to its bookbinding system, two separate machines were required to create a spiral-bound book: first, a forming machine would be used to form plastic coils, then, a binding machine would insert coils into pre-punched holes in paper. *Id.* at ¶ 2. Spiel's system integrated the process by linking the machines with a conveyor; this approach provides two primary benefits over the old method: (1) it allows coils to be custom-sized for the book they will bind, therein reducing

waste, and (2) it provides savings of time and resources because a single operator can perform both functions at once. *See id.* at ¶ 5.

While Spiel was not the first to create an integrated spiral bookbinding system, the prior art relied on rapid cooling of the plastic coils which resulted in brittle, ineffective coils; by contrast, Spiel's system uses ambient air to cool the coil while it travels on a conveyor between the coil forming portion of the system and the binding portion. *See id.* at ¶ 6. According to Spiel, cooling by ambient air was "a novel and important advancement in the art." *Id.*

Spiel alleges that Gateway has infringed on its patents because Gateway's PLASTIKOIL Concept III Interline System is "comprised [of] the same components as Spiel's" and that "[i]mportantly, the Gateway device uses ambient air to cool the coil." *Id.* at ¶ 24 (emphasis in original).

Analysis of a patent infringement claim contains two steps: "The first step is determining the meaning and scope of the patent claims asserted to be infringed. . . . The second step is comparing the properly constructed claims to the device accused of infringing." *Markman*, 52 F.3d at 976 (citation omitted). Only the first step, which is commonly referred to as claim construction, is before the Court.¹

II

¹The first step is an issue of law for the Court to determine, while the second step is an issue of fact. *See Markman*, 52 F.3d at 978 ("It has long been and continues to be a fundamental principle of American law that the construction of a written evidence is exclusively within the court." (quotation marks omitted)).

In constructing a claim, “words of a claim are generally given their ordinary and customary meaning . . . that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (*en banc*). To ascertain the meaning of a patent’s claims, courts may consider intrinsic evidence consisting of: (1) the claims themselves, (2) the specification, which “contains a written description of the invention that must enable one of ordinary skill in the art to make and use the invention,” *Markman*, 52 F.3d at 979, and (3) the patent’s prosecution history, which constitutes the “undisputed public record of proceedings in the Patent and Trademark Office.” *Id.* at 980 (quotation marks omitted). Extrinsic evidence, “which consists of all evidence external to the patent and its prosecution history, including expert and inventor testimony, dictionaries and learned treatises,” may also be relied upon; however, “it is less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quotation marks omitted). In this regard, “[e]xtrinsic evidence is to be used for the court’s understanding of the patent, not for the purpose of varying or contradicting the terms of the claims.” *Markman*, 52 F.3d at 981.

In making its objections, Spiel argues that in general, the intrinsic evidence in this case is not dispositive and that extrinsic evidence “should be considered by the Court in establishing the meaning of the patent claim terms.” Docket Entry # 88 (“Spiel Br.”) at 2.

Sitting *en banc*, the Federal Circuit recently revisited the issue of the relative weight that should be placed on intrinsic and extrinsic evidence in *Phillips*, stating that

extrinsic evidence “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence,” and counseling courts to “keep in mind the flaws inherent” in extrinsic evidence. 415 F.3d at 1319. The circuit court identified five reasons for viewing “extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms”: (1) it is not “created at the time of the patent prosecution for the purpose of explaining the patent’s scope and meaning,” (2) “extrinsic publications may not be written by or for skilled artisans and therefore may not reflect the understanding of a skilled artisan in the field of the patent,” (3) “expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence,” (4) “there is a virtually unbound universe of potential extrinsic evidence of some marginal relevance” of which each party will “naturally choose the pieces . . . most favorable to its cause, leaving the court with the considerable task of filtering the useful extrinsic evidence from the fluff,” and (5) “undue reliance on extrinsic evidence poses the risk that it will be used to change the meaning of claims in derogation of the indisputable public records consisting of the claims, the specification and the prosecution history, thereby undermining the public notice function of the patents.” *Id.*, 415 F.3d at 1318-19 (citations and quotation marks omitted). With these principles in mind, the Court considers Speil’s objections.

III

A. “Conveyor”

The Special Master, and the Magistrate Judge approved, defining the term “conveyor” as “a device that includes a moving surface for transporting articles, as opposed to a chute or a slide.” Docket Entry # 83 (“Report of Special Master”) at 26. Spiel objects to this definition, arguing that a conveyor “need not have a moving surface and because a ‘chute’ is simply a type of ‘conveyor.’” Spiel Br. at 2 (emphasis in original).

“Conveyor” is used in claim 1 of the ‘502 patent and claims 2 and 7 of the ‘426 patent; the use of “conveyor” in these claims suggests that an active moving surface is required. Claim 1 of the ‘502 patent claims “[a] combination plastic spiral coil forming and binding machine comprising . . . a conveyor for *carrying* [the] binding coils from [the] coil forming machine to [the] binding machine.” ‘502 Patent at col. 14, ln. 12-20 (emphasis added). The ‘462 patent contains a similar claim, but describes a “means for *carrying* [the] segments of hot binding coils from [the] coil forming machine to [the] binding machine” and later states that “said *carrying* means is a conveyor.” ‘462 Patent at col. 14, ln. 31-42 (emphasis added). The ‘462 Patent also claims that Spiel’s method includes “*conveying* [] segments of hot binding coils on a conveyor to a book binding machine [and] cooling said hot binding coils while being *conveyed* on said conveyor to said book binding machine.” *Id.* at col. 16, ln. 1-4 (emphasis added).

Furthermore, the specification of each patent also supports a construction of “conveyor” that requires a moving surface. The specification of the ‘502 patent states that “[w]hile other configurations for the . . . conveyor may be used, preferably the linkage

conveyor which conveys the plastic coils is a wide belt supported by a stationary horizontal platen, wherein the wide belt has a rigid chain construction with a plurality of fins attached thereto.” ‘502 patent at col. 2, ln. 42-47. While, as Spiel argues, “limitations from the specification are not to be read into the claims,” *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1326 (Fed. Cir. 2002), the specification is “[u]sually . . . dispositive” because “[t]he patentee may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” *Id.* at 1325.

The specifications state that it is only describing the “preferred” type of conveyor; however, the word “preferred” refers to the type of belt employed, such as its width, the angle of the platen, the construction of the belt, and presence or absence of fins, *not* whether a belt would be employed at all. This is supported by the specifications’ description of a “conveyor belt” made up of a drive pulley and gear motor, ‘502 Patent at col. 2, ln. 30, 48-56; ‘426 Patent at col. 2, ln. 28, 50-58, and the conveyor “advanc[ing]” the plastic coil. ‘502 Patent at col. 2, ln. 66-67 (“After the cooled plastic coil *is advanced* upon the conveyor” (emphasis added)); 426 Patent at col. 3, ln. 1-2 (same). Had Spiel intended “conveyor” to include mechanisms lacking a moving surface, such as a chute or a slide, it could have described the conveyor as an inactive object (*e.g.*, “After the cooled plastic coil *travels* through the conveyor”).

As the Magistrate Judge correctly identified, the prosecution history of both patents also supports the Special Master’s construction: In order to distinguish its system from the prior art, Spiel ascribed a narrow meaning to the term conveyor; had it adopted

a broad definition, as it does now, Spiel's claims would have encompassed the prior art and thus be unpatentable. *See* R&R at 14-15.

Contrary to Spiel's assertion, extrinsic evidence in the form of deposition testimony from (1) the inventor of Spiel's device, (2) two people skilled in bookbinding who are not affiliated with either party, and (3) Spiel's retained expert do not support Spiel's argument that the term "conveyor" includes devices without moving surfaces, such as chutes or slides. *See* Spiel Depo. at 95:8-10 (inventor testifying that a conveyor is "something that *moves* an item from point A to point B" (emphasis added)); Roberts Depo. at 55:2-55:11 (Q: . . . Would a conveyor in your industry have a moving surface? . . . [A]: I would think that to convey *it would have to move*. Q: It has to move. Okay. And figure one? Would that be a conveyor, that hand chute? A: It transfers the material. It's going to slide down that chute. Now mechanically, *no, it has no moving parts*." (emphasis added)); Brown Depo. at 136:21-24 ("Q: . . . What - - how would you define a conveyor? A: A conveyor is a transport system to *transport* an item or product from point A to point B, whether it be in a circle or a straight line, whether it be food or plastic." (emphasis added))²; Primeau Depo. at 59:18-25 ("A: For me a conveyor will *bring* one thing in a place - - will *bring* something from one point to the other point. It will convey - - it will *move* an object from Point A to Point B. Q: If this table were to incline or decline, could that be considered

²The next question asked is "Q: Does it have a moving surface?" Brown Depo. at 136:25; however, the Court is left in suspense because the question is contained on the last line of page 136 of the transcript and Spiel failed to submit the next page as part of its objections to the R&R, and the Court has been unable to find page 137 elsewhere in its docket.

a conveyor for coil? A: Well, if it's *not moving it further, it's not for me a conveyor.*" (emphasis added)).

Other extrinsic evidence relied on by Spiel is also unavailing. Examples of conveyors which do not contain moving surfaces submitted by Spiel are undoubtedly part of the "virtually unbound universe" of marginally relevant evidence on which the Federal Circuit has cautioned against relying, *Phillips*, 415 F.3d at 1318; indeed, these examples are simply a collection of printouts from websites which sell beltless conveyors. Thus, the Court declines to rely on this evidence.³ See *Phillips*, 415 F.3d at 1319 ("it is permissible for the district court in its sound discretion to admit and use [extrinsic] evidence").

Finally, while it may be the case that Spiel initially demonstrated its system at trade shows using a chute instead of a belt conveyor, these demonstrations cannot be used to broaden the scope of the term "conveyor" as it is used in the patents; simply stated, Spiel's demonstrations do nothing to inform a reader of the '502 and '426 Patents that the term "conveyor" includes devices without moving surfaces such as a chute or slide. See *Merrill v. Yeomans*, 94 U.S. 568, 573-74 (1876) ("The public should not be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights. . . . It seems to us that nothing can be more just and fair, both to the patentee and to the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent.").

³Even if these examples were authoritative, many of these beltless conveyors contain other types of moving surfaces, such as rollers.

B. “Hot Binding Coils”⁴

The Special Master recommended, and the Magistrate Judge approved, defining the term “hot binding coils” as “coils formed in the coil forming machine prior to cooling.” Report of Special Master at 26. Spiel objects, arguing: (1) that coils cannot exit inside the forming machine because the plastic in the forming machine “is never in the form of a separate discrete coil . . . let alone separate coils (plural),” Spiel Br. at 13 (emphasis partially omitted), and (2) that some cooling must inherently occur within the forming machine and “hot binding coils” include coils that have been partially fan-cooled within the machine. *Id.* at 15.

The use of “hot binding coils” in the claims of the patents belie Spiel’s argument that formed plastic must be cut prior to becoming a “coil” because both patents describe the hot binding coils *being cut*; this suggests that a “coil” exists prior to being cut. See ‘502 Patent at col. 14, ln. 35-36 (“a cutter *cutting said hot spiral coil* cut to a predetermined size” (emphasis added)); ‘426 Patent at col. 14, ln. 51-52 (“coil forming machine for heating, forming and cutting discrete segments of hot binding coils”). Furthermore, in describing the process which occurs inside the coil-forming machine, claim 3 of the ‘502 patent expressly refers to “discharging [the] heated plastic thread in free air *as a hot spiral coil*” prior to “a cutter cutting said hot spiral coil.” ‘502 Patent at col. 14, ln. 35-37 (emphasis added). Thus, Spiel’s contention that “items can only be described as coils *after leaving the forming machine*,” Spiel Br. at 14 (emphasis in original), is wrong; indeed, the patents’

⁴The patents use “hot binding coils” interchangeably with “hot spiral coils”; therefore, the Court’s discussion of the former term is applicable to the latter.

specifications confirm this. *See* '502 Patent at col. 12, ln. 56-60 ("For example, a typical forming machine [] takes plastic thread [] from [the] spool [], preheats it in [a] chamber [] and then winds it on a mandrel [] where it emerges in free air as a hot spiral coil []. It passes through a guillotine cutter [] which cuts it to size."); '426 Patent at col. 12, ln. 63-67 (same).

With respect to the argument that a partially fan-cooled coil is still a "hot binding coil," Spiel argues that if the term were constructed to exclude coils which have been partially cooled by a small fan inside the forming machine, "hot binding coils" would emerge from the forming machine too hot to hold its shape and become deformed. *See* Spiel Br. at 15. The Special Master and Magistrate Judge rejected this assertion because the intrinsic evidence establishes that "no cooling takes place prior to the cutting of the coils." R&R at 23; *see also* Report of Special Master at 12-16. While the Court understands that Spiel did not intend to create coils which become deformed, the intrinsic evidence does not support the inclusion of a small fan inside the forming machine to partially cool just-formed coils because it only describes the coil being cooled while the coil travels between the forming machine and the binding machine, and it distinguishes Spiel's system from the prior art which included a cooling mechanism within the forming machine. *See, e.g.*, '502 Patent at col. 12, ln. 22-40 (describing prior art's rapid cooling of the coil within the forming machine and that process's "drawback" of creating an embrittled coil); '426 Patent at col. 12, ln. 28-47 (same). Indeed, both patents state that an "object of th[e] invention [is] to provide a spiral bound book with a *durable, non-brittle* plastic spiral," '502 Patent at col. 1, ln.66-67; '426 Patent at Col. 2, ln. 1-2, and the prosecution history explicitly states that

“there is no cooling down of ‘hot coils’” in Spiel’s forming machine and that “the spiral coil is cut into segments prior to cooling.” Docket Entry # 67-10 (Amendment to ‘462 Patent Application) at 12.

While Spiel’s invention does not include a fan or other cooling device within the forming machine, this does not result in, as Spiel argues, *no* amount of cooling occurring within the forming machine; the patents do not preclude a just-formed coil from being partially cooled by ambient air⁵ within the forming machine prior to being cut and further cooled as it travels to the binding machine. Thus, the term “hot binding coils” should be defined as coils formed in the forming machine which have not been cooled by means other than exposure to ambient air within the forming machine.

C. “First Higher Temperature”

The Special Master recommended, and the Magistrate Judge approved, defining the term “first higher temperature” as “the temperature at which the hot binding coils are formed, in the case of ‘502 patent claim 1, and the temperature at which the hot binding coils are formed *and cut*, in the case of the ‘426 patent, claims 1, 6 and 7.” Report of Special Master at 16 (emphasis added). Spiel only objects to the definition of the term in the ‘502 patent, arguing that the ‘426 definition should be adopted. *See* Spiel Br. at 19.

Claim 1 of the ‘502 patent states that Spiel’s machine consists of, *inter alia*, “a coil forming machine *forming* hot binding coils at a first higher temperature.” ‘502 Patent at col. 14, ln. 14-15 (emphasis added). By contrast, the ‘462 patent states that Spiel’s

⁵As explained below, the term “ambient air” means surrounding air that has not been modified, as by a compressor, refrigerant or a fan.

machine consists of, *inter alia*, “a coil forming machine for heating, *forming and cutting* discrete segments of hot binding coils at a first higher temperature.” ‘462 Patent at col. 14, ln. 25-27 (emphasis added). Thus, the plain meaning of claim 1 of the ‘502 patent supports the conclusion that “first higher temperature” refers to the temperature at which the binding coils are formed, and does not include the temperature at which the binding coils are cut.

It is true, as Speil argues, that the specification of the ‘502 Patent states that at the time of being cut, the plastic spiral coils are “still-hot,” 502 Patent at col. 12, ln. 65; however, it does not follow that a coil which is “still-hot” is at its “*first higher temperature*” because, as used in the ‘502 Patent, the term “first higher temperature” refers to the *initial* temperature of the coil after being formed, which is necessarily a higher temperature than when the coil is cut. Thus, with respect to the ‘502 Patent, the term “first higher temperature” should be defined, as the Special Master and Magistrate Judge determined, as the temperature at which the hot binding coils are formed.

D. “Ambient Air”

The Special Master recommended, and the Magistrate Judge approved, defining “ambient air” as “surrounding air that has not been modified, as by a compressor, refrigerant or a fan,” Report of Special Master at 18-19. Spiel objects to the definition’s inclusion of the word “fan,” arguing that “[f]ans do not change the ambient air temperature” and the patents do not “distinguish its form[s] of cooling from a fan that blows ambient temperature air.” Spiel Br. at 21. Spiel acknowledges that “‘ambient air’ inherently means surrounding or open air.” *Id.* at 22.

Claim 1 of the '462 patent states that Spiel's system includes "means for carrying [] segments of hot binding coils from [the] coil forming machine to [the] binding machine under conditions in ambient air . . . providing sufficient duration of travel time to provide enough slow cooling time in [] ambient air to bring the temperature of [the] binding coils down to close to room temperature," '462 Patent at col. 14, ln. 31-37; use of "ambient air" in claim 6 of the '462 patent and claim 1 of the '502 patent do not differ in any meaningful manner. See '462 Patent at col. 14, ln. 65-col. 15, ln. 2; '502 Patent at col. 14, ln. 20-23. On the face of the claims, the term "ambient air" does not appear to include air which has been blown by a fan; indeed the phrases "sufficient duration of travel time" and "slow cooling" run contrary to the assertion that air blown by a fan, which would speed up the cooling process, is encompassed by the term "ambient air." The patents' specifications also support this interpretation. See, e.g., '502 Patent at Col. 13, ln. 5-13 ("As it takes some time for the cooling conveyor [] to advance, a coil [] in the midsection [] would be significantly cooler by action of ambient air. Further movement [of the coil] in ambient air temperature near the end of travel further cools [the] coil. . . . There is no material embrittlement since *slow cooling* using ambient air is used." (emphasis added)); '462 Patent at Col. 13, ln. 12-21 (same).

The prosecution history also belies Spiel's contention that "ambient air" includes air blown by a fan. In prosecuting the '462 patent, Spiel expressly distinguished the cooling by ambient air found in his system from the cooling system found in Patent No. 6,190,156 of André Primeau, et al. ("Primeau '156") by stating that Primeau's coil "is not cooled at ambient air temperatures, but is rather inserted in a closed sleeve 48, to which is

applied cool air from a cooling device 50.” Docket Entry # 67-8 at 10 (Information Disclosure Statement to ‘462 Patent Application).⁶ In Primeau ‘156, the “cooling device 50” is represented by a fan, *see* Docket Entry 67-13 (“Primeau ‘156 Patent”) at fig. 1; thus, Spiel expressly distinguished cooling by ambient air from cooling by fan. It is true, as Spiel argues, that Primeau ‘156 does not teach cooling by fan alone, but rather cooling by a sleeve which is cooled by a fan; however, in a subsequent amendment to the ‘462 patent application, Spiel further distinguishes his cooling mechanism from that found in Primeau ‘156: “Primeau ‘156’s distinct *cooler machine 50 uses forced convection. Use of ambient air within natural convection is not suitable in Primeau ‘156. . . .* More rapid heat dissipation as by forced convection (i.e. a fan 50) or refrigeration is required in Primeau ‘156,” Primeau ‘156 Patent at 13 (emphasis added); notably, Spiel did not distinguish Primeau ‘156 on the basis of its cooling sleeve. Thus, the prosecution history demonstrates that Spiel’s teaching of cooling by “ambient air” does not include use of a fan and the Court agrees with the Special Master and Magistrate Judge that the term “ambient air” should be defined as surrounding air that has not been modified, as by a compressor, refrigerant or a fan.

The Court notes that the ordinary dictionary meaning of the word “ambient” is “surrounding,” *The Merriam-Webster Dictionary* at 39 (Henry Bosley Woolf ed., Simon & Schuster, Inc. 1974), or “an encompassing atmosphere,” Spiel Br. at 22 (citing the *Merriam-Webster Collegiate Dictionary*); neither of these definitions support Spiel’s contention that

⁶This document was submitted to the Patent and Trademark Office one month prior to the ‘502 patent being granted.

"ambient air" includes air blown by a fan, because air that is blown no longer simply surrounds the coil nor is it part of the atmosphere encompassing the coil.

CONCLUSION

For reasons stated above, the court defines the disputed terms as follows: (1) "conveyor" is defined as a device that includes a moving surface for transporting articles, as opposed to a chute or a slide, (2) "hot binding coils" is defined as coils formed in the forming machine which have not been cooled by means other than exposure to ambient air within the forming machine, (3) with respect to the '502 Patent, "first higher temperature" is defined as the temperature at which the hot binding coils are formed, and (4) "ambient air" is defined as surrounding air that has not been modified, as by a compressor, refrigerant or a fan.

SO ORDERED.

/SIGNED/


FRÉDERIC BLOCK
Senior United States District Judge

Brooklyn, New York
February 27, 2007